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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,695	01/27/2004	Shilin Chen	074263.0209 (SC-98-025 C3)	1433

31625 7590 04/13/2005

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EXAMINER

WALKER, ZAKIYA NICOLE

ART UNIT	PAPER NUMBER
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3672

DATE MAILED: 04/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/765,695

Applicant(s)

CHEN, SHILIN

Examiner

Zakiya N. Walker

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 01272004.09082004.  
12152004
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

1. The abstract of the disclosure is objected to because the last sentence recites purported merits. Correction is required. See MPEP § 608.01(b).
2. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 1-7 and 10-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Forsberg.

Forsberg discloses an apparatus that includes a roller cone drill bit (not shown), comprising: a bit body; three roller cones attached to said bit body and able to rotate with respect to said bit body; a plurality of cutting elements 10 arranged on each of the cones so that cutting elements on adjacent cones intermesh between the adjacent cones, the cutting elements being arranged such that a projected area of said cutting elements in contact with a formation during drilling is substantially the same for each of the cones. With respect to depending claims 2-7, the reference teaches the limitations as claimed including: balanced axial force; same work performed; same depth of penetration for each element; optimized distribution of force; and superhard tungsten carbide inserts. See figures 1-7. With respect to claim 10, the reference discloses an apparatus that includes a roller cone drill bit, comprising: a bit body; three roller cones attached to said bit body and able to rotate with respect to said bit body; a plurality of cutting elements arranged on each of the cones so that cutting elements on adjacent cones intermesh between the adjacent cones, the cutting elements being arranged such that a depth of penetration for the cutting elements into a formation during drilling is substantially the same for each of the cones. With respect to depending claims 11-16, the reference teaches the limitations as claimed, including balanced axial force; same work performed; same projected area for each element; optimized distribution of force; and superhard tungsten carbide inserts. See figures 1-7.

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5. Claims 10-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Vanderford et al.

Vanderford et al. discloses an apparatus that includes a roller cone drill bit 10, comprising: a bit body 12; three roller cones 14-16 attached to said bit body and able to rotate with respect to said bit body; a plurality of cutting elements 30 arranged on each of the cones so that cutting elements on adjacent cones intermesh between the adjacent cones, the cutting elements being arranged such that a depth of penetration for the cutting elements into a formation during drilling is substantially the same for each of the cones. With respect to depending claims 11-16, the reference teaches the limitations as claimed, including balanced axial force; same work performed; same projected area for each element; optimized distribution of force; and superhard tungsten carbide inserts. See figures 1-2.

6. Claims 1-5, 8-14, 17, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Isbell et al. (cited by applicant).

Isbell et al. discloses an apparatus that includes a roller cone drill bit 311, comprising: a bit body 13; three roller cones 313, 315, 317 attached to said bit body and able to rotate with respect to said bit body; a plurality of cutting elements arranged on each of the cones so that cutting elements on adjacent cones intermesh between the adjacent cones, the cutting elements being arranged such that a projected area of said cutting elements in contact with a formation during drilling is substantially the same for each of the cones. With respect to depending claims 2-7, the reference teaches the limitations as claimed including: balanced axial force; same work performed; same

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depth of penetration for each element; optimized distribution of force; and superhard tungsten carbide inserts. See figures 4 and 7. With respect to claim 10, the reference discloses an apparatus that includes a roller cone drill bit 311, comprising: a bit body 13; three roller cones 313, 315, 317 attached to said bit body and able to rotate with respect to said bit body; a plurality of cutting elements arranged on each of the cones so that cutting elements on adjacent cones intermesh between the adjacent cones, the cutting elements being arranged such that a depth of penetration for the cutting elements into a formation during drilling is substantially the same for each of the cones. With respect to depending claims 11-114, 17, and 18, the reference teaches the limitations as claimed, including balanced axial force; same work performed; same projected area for each element; optimized distribution of force; and milled teeth with hardface coating. See figures 4 and 7.

### ***Double Patenting***

7. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

8. Claims 3, 12, 5, and 14 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 12, 13, 22, and 23 of copending

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Application No. 10/765,746. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented. The claims are considered conflicting even though they list structure in the form of A, B, C, D versus A, B, D, C. Since these are apparatus claims, the scope of the claims remain the same, and the order of elements listed is irrelevant.

### ***Conclusion***


9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Allen teaches a two cone drill bit having milled teeth or carbide inserts having the same depth of penetration into a formation during drilling.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zakiya N. Walker whose telephone number is (703) 305-0302. The examiner can normally be reached on Tuesday-Friday, 6:30 AM-5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on (703) 308-2151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Zakiya N. Walker  
Primary Examiner  
Art Unit 3672

ZW  
March 31, 2005